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PATENT ABSTRACTS OF JAPAN

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(54) PIEZOELECTRIC RESONANCE MOTOR

(57)Abstract:

PURPOSE: To miniaturize and thin the title motor and reduce the weight of the same motor, by erecting integrally a driving piece on a base body, bonded with piezoelectric elements and generating bending vibration and contracting vibration simultaneously.

CONSTITUTION: Piezoelectric elements 2a~2c are bonded to the lower surface of a base body 1, consisting of a rectangular rod type elastic body, while driving pieces 3a, 3b are formed on the upper surface of the base body 1 so as to project therefrom. Said driving pieces 3a, 3b are located at the centers of loops upon the bending resonance oscillation of the base body 1 to form a resonance unit U1. When alternate electric signals, having a resonance frequency, are impressed on the piezoelectric elements 2a, 2c, which generate bending vibration in the base body 1, and the piezoelectric element 2c, which generates lengthwise resonance in the base body 1; in parallel, the resonance unit U1 vibrates simultaneously with the compound resonance of a bending mode and a lengthwise mode. As a result, the free ends of the driving pieces 3a, 3b may be vibrated into a predetermined direction.

